

REMARKS

Claims 1-8 and 10-13 remain pending in this application. Claims 1-8 and 10-13 are rejected. Claims 9 and 14-18 are previously cancelled. Claim 1 is amended herein to clarify the invention.

Applicants herein traverse and respectfully request reconsideration of the rejection of the claims cited in the above-referenced Office Action.

Claims 1-8 and 12 are rejected under 35 U.S.C. § 102(b) as being anticipated by Dasser (DE 14 78 857 A1). Applicants herein respectfully traverse these rejections. "Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, *arranged as in the claim.*" *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 221 USPQ 481, 485 (Fed. Cir. 1984) (emphasis added). It is respectfully submitted that the cited reference is deficient with regard to the following.

Independent claim 1 is amended, and recites in pertinent part the following:

a piston driving mechanism for driving the
piston member between a first position corresponding
to the clamping position of the clamping rod and a
second position corresponding to the clamp release
position of the clamping rod, the piston driving
mechanism being provided with a spring for urging

the piston member to the first position corresponding to the clamping position of the clamping rod and with a hydraulic chamber for driving the piston member to the second position corresponding to the clamp release position of the clamping rod by hydraulic pressure; and

a cam mechanism for driving the engagement portion of the clamping rod in a clamping direction roughly rectangular to the longitudinal direction of the clamping rod by a driving force of the piston driving mechanism driving the piston member to the first position.

It is respectfully submitted that the cited Dasser reference lacks any teaching directed to the claimed recitation of a "a spring for driving the piston member to the first position corresponding to the clamping position of the clamping rod," nor does it disclose structure corresponding to the claimed "cam mechanism for driving the engagement portion of the clamping rod in a clamping direction roughly rectangular to the longitudinal direction of the clamping rod by a driving force of the piston driving mechanism driving the piston member to the first position." Applicants believe that a description of the functioning of the device of Dasser will make clear

that these claimed features are not disclosed in the cited reference, and hence, that the claim is not anticipated by the cited Dasser reference.

The operational progression of the device disclosed in Dasser is depicted in Figs. 2, 3 and 4. In Fig. 2, the device is shown in an initial state, before being energized for performing a clamping operation. As subsequently shown in Fig. 3, pressurized air (pneumatic pressure) is introduced through the right opening "C," causing the piston 2 to move to the left, and correspondingly to move the clamping arm 3 into the opening of the workpiece. In this not-yet-clamped position, the articulated piston 6 is maintained in a pressed state against a stop ring 7 located at a forward end of the piston 2 by a spring 4. The sole purpose of the spring 4 in Dasser, in stark contrast to the claimed invention, is therefore simply to maintain the unclamped orientation of the clamping arm 3, by resisting relative movement between the articulated piston 6 and the piston 2, within which the former is slidably received. Note, that in both Figs. 2 and 2, no movement occurs between the articulated piston 6 and the piston 2, and hence the unclamped orientation of the clamping arm, up to this point, is assured.

The clamping arm 3 has a widened shoulder at a portion thereof maintained inside of the body 1, which comes into engaged contact with the ball adapter 5 (serving as a rotatable ball joint), thereby preventing further forward movement of the clamping arm past that shown in Fig. 3.

Further movement of the piston 2 to the left causes the articulated piston 6 to be urged against the spring 4, compressing the spring 4 in response to the relative movement of the articulated piston 6 and the piston 2, thereby lifting the articulated piston 6 from contact with the stop ring 7. Because of the tilt of the bore of the piston 2, within which the articulated piston 6 is received, as the pneumatic pressure C is continued, the clamping arm is rotated about the ball adapter 5, so as to be brought into a clamping position shown in Fig. 4. Ball adapter 5 therefore operates a rotatable joint, simply allowing pivoting of the clamping arm 3 as it is tilted by continued movement of the piston 2 urged by pneumatic pressure operating against the spring 4.

Thus, it should be abundantly clear that, the spring 4 of Dasser operates in a manner resisting movement of the clamping arm in a direction of clamping brought about by reason of the pneumatic pressure C, rather than the exact opposite, i.e., “urging the piston member to the first position corresponding to the clamping position of the clamping rod” as claimed. It is the pneumatic pressure C, and not the spring 4 in Dassar which drives the piston 2 to a position farther left, and which thereby brings about a clamping operation of the clamping arm 3.

Applicants respectfully submit that the Examiner’s statement in the Response to Arguments on page 5 of the Office Action relative to claim 4 of Dasser is, therefore, misplaced, since the claim merely states that the spring 4 presses the articulated piston against the stop ring 7, as shown in Fig. 3, when no clamping is

achieved. The spring, prevented against any further forward movement by the stop ring, is prevented from “urging the piston member to the first position corresponding to the clamping position of the clamping rod,” as claimed, which instead is accomplished in Dasser by pneumatic pressure C.

In addition, applicants respectfully submit that the ball adapter 5 serves merely as a rotatable ball joint, and provides no function even remotely akin to a cam mechanism, which term is understood in the art to include a member with is eccentric or as including a variably shaped surface which influences other motion of a “follower” contacting the surface of the member. This is easily distinguished from the purely pivoting function provided by a movable joint or rotary bearing, as disclosed in Dasser.

In view of the above, it is respectfully submitted that claim 1 particularly describes and distinctly claims elements not disclosed in the cited reference.

Therefore, based on the foregoing, reconsideration of the rejections of claims 1-8 and 12 and their allowance are respectfully requested.

Claims 1, 2, 4, 6, 8 and 10-13 are rejected as obvious over Yonezawa (US 6,095,509) in view of Kohlert (US 5,746,420) under 35 U.S.C. §103(a). The applicants herein respectfully traverse this rejection. For a rejection under 35 U.S.C. §103(a) to be sustained, the differences between the features of the combined references and the present invention must be obvious to one skilled in the art.

It is respectfully submitted that the cited Yonezawa reference is devoid of teaching directed to a "a spring for urging the piston member to the first position corresponding to the clamping position of the clamping rod ." The spring 27, referred to by the Examiner at col. 5, lines 39-44 in Yonezawa, does not urge the collet 13 into a clamping position, by just the opposite, as is stated at the referenced passage, stating that "the collet 13 slightly descends by a stroke (M) against the push spring with a downward driving force of the pull rod 12." (emphasis added). Thus, it is the pull rod, and not the spring 27, that provides the drive force, and the spring instead provides resistance against this clamping force. The reference is clear that the purpose of the spring 27 is to provide an exactly opposite function to that of the claimed invention, i.e. to maintain an unclamping condition, as stated unequivocally at col. 2, lines 9-13.

Furthermore, applicants respectfully submit that Yonezawa fails to teach or suggest clamping by "driving the engagement portion of the clamping rod in a clamping direction roughly rectangular to the longitudinal direction of the clamping rod" as claimed. Rather, in contrast with this claimed feature, when clamping, the collet 13 expands while being moved downward by stroke (M), and is therefore displaced vertically in a direction of the movement of the pull rod 12.

Kohlert, cited merely for alleged teaching relating to a cam mechanism, fails to provide the featured discussed above that are absent in Yonezawa. Thus, a *prima facie* case of obviousness, which requires that the proffered combination of

references discloses each and every claimed element cannot be established. Thus, it is respectfully submitted that the rejected claims are not obvious in view of the cited references for the reasons stated above. Reconsideration of the rejections of claims 1, 2, 4, 6, 8 and 10-13 and their allowance are respectfully requested.

Applicants respectfully request a one (1) month extension of time for responding to the Office Action. Please charge the fee of \$130 for the extension of time to Deposit Account No. 10-1250.

The USPTO is hereby authorized to charge any fee(s) or fee(s) deficiency or credit any excess payment to Deposit Account No. 10-1250.

In light of the foregoing, the application is now believed to be in proper form for allowance of all claims and notice to that effect is earnestly solicited.

Respectfully submitted,
JORDAN AND HAMBURG LLP

By Frank J. Jordan by:
Frank J. Jordan
Reg. No. 20,456
Attorney for Applicants

and,

By Lawrence I. Wechsler
Lawrence I. Wechsler
Reg. No. 36,049
Attorney for Applicants

Jordan and Hamburg LLP
122 East 42nd Street
New York, New York 10168
(212) 986-2340